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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,026	07/30/2003	Carl K. Esche	0013.0039	7776
63970	7590	10/27/2006		
MIN, HSIEH & HACK LLP (CUSTOMER NO. W/ ETHYL (NEW MARKET) 8270 GREENSBORO DRIVE SUITE 630 MCLEAN, VA 22102				
			EXAMINER MCAVOY, ELLEN M	
			ART UNIT 1764	PAPER NUMBER

DATE MAILED: 10/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	10/630,026		ESCHE, CARL K.	
	Examiner		Art Unit	
	Ellen M. McAvoy		1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11,13-25,27-35 and 37-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11,13-25,27-35 and 37-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 14 August 2006 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-11, 13-25, 27-35 and 37-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norman et al (5,942,470).

Applicant's arguments filed 14 August 2006 have been fully considered but they are not persuasive. As previously set forth, Norman et al ["Norman"] disclose gear oils and gear oil additive concentrates which comprise (i) at least one oil-soluble sulfur-containing extreme pressure or antiwear agent, (ii) at least one oil-soluble amine salt of a partial ester of an acid of phosphorus, and (iii) at least one oil-soluble succinimide ashless dispersant, wherein the proportions of (i):(ii):(iii) on a weight basis is (1-5):(0.1-3):(0.05-4). See column 1, line 40 to column 2, line 10. Component (ii) which includes alkylamine salts of phosphorus acids are

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represented by formulas (I), (II) and (III) in column 4, top, wherein each of the X groups is, independently, an oxygen atom or a sulfur atom. Thus monothiophosphates are encompassed when one X group is a sulfur atom and the other X groups in the same molecule are oxygen atoms. Several of the specific compounds are set forth in columns 4-10 and include several monothiophosphate compounds such as octylamine salt of O,O-dibutylthiophosphoric acid. The examiner maintains the position that component (ii) of Norman meets the limitation in the claims of the alkylamine salt of a dialkylmonothiophosphate component. Norman teaches that nitrogen-containing ashless dispersants may also be added to the composition. See columns 14-15 wherein component (v) is set forth which includes conventional ashless dispersants including the Mannich-type dispersants. Norman teaches that the additive concentrates contain an oleaginous diluent. See column 18, lines 17-39. Norman allows for the addition of other conventional additives to the gear oils and to the gear oil additive concentrates. Such additives include antioxidants, detergents and pour point depressants. See column 19, lines 29-60. The examiner maintains the position that Norman meets the limitations of the above rejected claims which are drawn to an oil-soluble lubricant additive package comprising (1) at least one alkylamine salt of a dialkylmonothiophosphate and (2) another component such as a detergent, a dispersant, an antioxidant or a pour point depressant. The open-ended claim language "comprising" allows for the addition of other components to the additive packages. The examiner maintains the position that the gears disclosed in Norman are an example of a "machine" lubricated by the gear oil compositions disclosed.

Applicant argues that:

“Independent claims 1, 11, 25 and 35 are all directed to an oil soluble lubricant *additive* package having a sulfur content less than about 0.3 wt.%. One of ordinary skill in the art would appreciate that the components of an additive package are generally present in higher weight percentages than those same components in a fully finished lubricating oil composition.”

This is not deemed to be persuasive because the oil soluble lubricant additive packages of the claims include the language that the package “yields a lubricating oil having a sulfur content less than about 0.3 wt.% ...”. Thus the claimed additive packages themselves do not have a sulfur content less than about 0.3 wt.%, but upon dilution with a lubricating base oil, the resulting lubricating oil composition has a sulfur content of less than about 0.3 wt.% which is within the range from 0.1-0.5 wt.% sulfur taught by Norman as set forth in the previous office action.

Applicant argues that omitting component (i), the at least one oil-soluble sulfur-containing extreme pressure or antiwear agent, of Norman is improper. The examiner disagrees and maintains the position that omitting a component and the subsequent loss of its function is obvious to the skilled oil formulator. See Ex parte Wu, 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989) wherein the Board affirmed the rejection, holding that it would have been obvious to have omitted the polybasic acid salts of the primary reference where the function attributed to such salt is not desired or required, such as in compositions for providing corrosion resistance in environments which do not encounter fresh water. See also In re Larson, 340 F.2d 965, 144 USPQ 347 (CCPA 1965). The examiner maintains the position that if an extreme pressure or antiwear agent was not needed in the oil compositions of Norman, it would have been obvious to the skilled artisan to have removed the conventional additive.

Applicant argues that Norman does not teach or suggest the claimed phosphorus content of less than about 0.11 wt.%. This is not deemed to be persuasive because, as set forth above, the claims include the proviso "...wherein the oil soluble lubricant additive package yields a lubricating oil having a sulfur content less than about 0.3 wt.% and a phosphorus content of less than about 0.11 wt %". Thus the examiner is of the position that the claimed additive packages themselves do not have a sulfur content less than about 0.3 wt.% and a phosphorus content of less than about 0.11 wt.%, but upon dilution with a lubricating base oil, the resulting lubricating oil composition has a sulfur content of less than about 0.3 wt.% and a phosphorus content of less than about 0.11 wt.% which is within the ranges of sulfur and phosphorus taught by Norman as set forth in the previous office actions.

Claim Rejections - 35 USC § 103

Claims 25, 27-35 and 37-46 are also still rejected under 35 U.S.C. 103(a) as being unpatentable over Walters et al (5,342,531).

Applicant's arguments filed 14 August 2006 have been fully considered but they are not persuasive. As previously set forth, Walters et al ["Walters"] disclose lubricating oil compositions suitable for use as gear oils which comprise a major proportion of a polyalkylene glycol and a minor proportion dissolved therein of (a) at least one sulfur-containing antiwear or extreme pressure agent, (b) at least one amine salt of at least one partially esterified monothiophosphoric acid, and (c) at least one amine salt of at least one partially esterified phosphoric acid. The examiner maintains the position that component (b), set forth in column 2,

line 21 to column 4, line 9, meets the limitation of the at least one alkylamine salt of a dialkylmonothiophosphate component of the claims. Walters also allows for the addition of other components to the lubricant compositions or additive concentrates such as sterically hindered phenolic and amine antioxidants. See column 6, line 31 to column 7, line 45. Additive concentrates and industrial gear applications are set forth in column 9, lines 20-34. The examiner maintains the position that Walters meets the limitations of the above rejected claims which are drawn to an oil-soluble lubricant additive package comprising (1) at least one alkylamine salt of a dialkylmonothiophosphate and (2) another component such as an antioxidant. The open-ended claim language “comprising” allows for the addition of other components to the additive packages. The examiner maintains the position that the gears disclosed in Walters are an example of a “machine” lubricated by the gear oil compositions disclosed.

Applicant argues that Walters does not teach or suggest the claimed sulfur content. This is not deemed to be persuasive because Walters does teach in column 2, lines 13-19, that the sulfur-containing extreme pressure or antiwear agent, component (a), is dissolved in the polyalkylene glycol base lubricating oil in an amount “usually between 0.01 and 2.0% by weight, and preferably from 0.02 to 0.4% by weight, based on the total weight of the solution.” Thus, the examiner is of the position that the amount of sulfur present in the compositions disclosed by Walters may be within the claimed limit of less than 0.3 wt.%. Additionally, as set forth above, an argument could be made that it would have been obvious to the skilled oil formulator to have omitted the sulfur-containing extreme pressure agent, component (a), from the oil compositions

of Walters if its function was not desired. See Ex parte Wu , 10 USPQ 2031 (Bd. Pat. App. & Inter. 1989) wherein the Board affirmed the rejection, holding that it would have been obvious to have omitted the polybasic acid salts of the primary reference where the function attributed to such salt is not desired or required, such as in compositions for providing corrosion resistance in environments which do not encounter fresh water. See also In re Larson, 340 F.2d 965, 144 USPQ 347 (CCPA 1965).

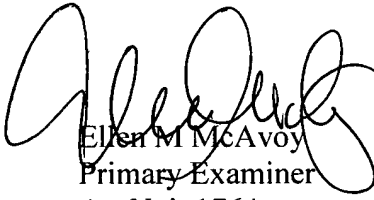
Applicant also argues that Walters does not teach or suggest the claimed phosphorus content. This is not deemed to be persuasive because Example I in column 9 of Walters sets forth a polyalkylene glycol composition containing three phosphorus-containing components: 0.13% of C₁₂₋₁₄ tertiary alkyl primary amine salt of dibutylthiophosphoric acid, 0.11 % of oleylamine salt of dibutylthiophosphoric acid and 0.27 % of oleylamine salt of amyl acid phosphate. The three components add to 0.51 wt.% which is less than th 0.675 wt.% of the phosphorus component applicant adds to their composition as set forth on page 19 of the specification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M. McAvoy
Primary Examiner
Art Unit 1764

EMcAvoy
October 23, 2006